

COST OF CAPITAL STUDY

YIELD CAPITALIZATION

2011 ASSESSMENT YEAR

APPENDIX C

NATURAL GAS DISTRIBUTION

EQUITY RATE						8.50%	
CAPITAL ASSET PRICING MODEL							PAGE
CAPM Ex Post						7.37%	5
CAPM Ex Ante						7.66%	6
DIVIDEND GROWTH MODELS							
Value Line, based on Dividends Growth						7.40%	8
Value Line, based on Earnings Growth						8.60%	9
Value Line, based on Return on Equity						8.00%	10
RANGE						7.37 - 8.60%	
DEBT RATE						6.00%	11
MARKET CAPITAL STRUCTURE							
Equity	65%	x	8.50%	=		5.53%	3
Debt	35%	x	6.00%	=	2.10%		3
Marginal Tax Rate	38%	=	(1-.038)	x	2.10%	<u>1.30%</u>	
WEIGHTED AVERAGE COST OF CAPITAL						6.83%	

SUPPORT FOR GUIDELINE COMPANIES

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Capital Structure at Book Value

Company	Ticker	Beta	P/E Ratio	Div'd Yield	Common Stock	%	Preferred Stock	%	Long Term Debt	%	Total Debt & Equity
AGL Resources	atg	0.75	12.5	4.8%	1,888,608,341	55.5%	-	0.0%	1,514,000,000	44.5%	3,402,608,341
Atmos Energy Corp	ato	0.65	13.0	4.5%	2,181,746,184	54.7%	-	0.0%	1,809,500,000	45.3%	3,991,246,184
Laclede Group	lg	0.60	13.1	4.6%	556,187,770	60.4%	-	0.0%	364,300,000	39.6%	920,487,770
New Jersey Resources	njr	0.65	16.8	3.3%	723,114,218	62.8%	-	0.0%	428,900,000	37.2%	1,152,014,218
Nicor Inc	gas	0.70	15.4	4.3%	1,079,162,531	71.8%	100,000	0.0%	423,400,000	28.2%	1,502,662,531
Nisource Inc	ni	0.85	13.6	5.5%	4,939,929,122	45.3%	-	0.0%	5,964,300,000	54.7%	10,904,229,122
NW Natural Gas	nwn	0.60	18.1	3.6%	684,552,122	53.6%	-	0.0%	591,600,000	46.4%	1,276,152,122
Piedmont Natural Gas	pny	0.65	19.0	3.8%	906,701,741	55.3%	-	0.0%	732,000,000	44.7%	1,638,701,741
South Jersey Industries	sji	0.60	18.3	2.9%	563,102,751	66.4%	-	0.0%	285,000,000	33.6%	848,102,751
Southwest Gas	swx	0.75	14.6	3.0%	1,118,209,194	51.0%	-	0.0%	1,075,500,000	49.0%	2,193,709,194
UGI Corp	ugi	0.65	11.8	3.4%	1,839,259,716	56.2%	-	0.0%	1,432,200,000	43.8%	3,271,459,716
WGL Holdings	wgl	0.65	17.2	4.2%	1,165,452,383	66.3%	-	0.0%	592,900,000	33.7%	1,758,352,383
Mean		0.68	15.3	4.0%	1,470,502,173	58.3%		0.0%	1,267,800,000	41.7%	
Weighted Mean					17,646,026,073	53.7%	100,000	0.0%	15,213,600,000	46.3%	32,859,726,073
Median						55.9%		0.0%		44.1%	

SUPPORT FOR CAPITAL STRUCTURE MARKET VALUE

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Capital Structure at Market Value

Company	Ticker	Stock Average	Common Shares	Common Stock	%	Preferred Stock	%	Long Term Debt	%	Total Debt & Equity
AGL Resources	atg	37.718	78,041,667	2,943,601,610	63.4%	-	0.0%	1,695,982,800	36.6%	4,639,584,410
Atmos Energy Corp	ato	30.147	90,154,801	2,717,866,734	58.6%	-	0.0%	1,917,828,733	41.4%	4,635,695,467
Laclede Group	lg	35.570	22,292,095	792,929,819	67.2%	-	0.0%	387,736,930	32.8%	1,180,666,749
New Jersey Resources	njr	41.690	41,250,098	1,719,716,586	78.8%	-	0.0%	462,938,278	21.2%	2,182,654,864
Nicor Inc	gas	46.615	45,534,284	2,122,580,649	82.3%	100,000	0.0%	457,001,788	17.7%	2,579,682,437
Nisource Inc	ni	17.335	278,305,866	4,824,432,187	42.8%	-	0.0%	6,437,637,611	57.2%	11,262,069,798
NW Natural Gas	nwn	48.205	26,533,028	1,279,024,615	65.8%	-	0.0%	664,097,653	34.2%	1,943,122,268
Piedmont Natural Gas	pny	29.170	71,113,862	2,074,391,355	73.3%	-	0.0%	757,012,122	26.7%	2,831,403,476
South Jersey Industries	sjj	51.265	29,872,825	1,531,430,374	87.0%	-	0.0%	229,681,500	13.0%	1,761,111,874
Southwest Gas	swx	35.177	45,548,236	1,602,235,115	56.7%	-	0.0%	1,221,445,350	43.3%	2,823,680,465
UGI Corp	ugi	30.210	110,466,049	3,337,179,340	68.4%	-	0.0%	1,539,237,420	31.6%	4,876,416,760
WGL Holdings	wgl	37.485	51,071,533	1,914,416,415	74.9%	-	0.0%	641,599,373	25.1%	2,556,015,788
			Mean		68.3%		0.0%		31.7%	
			Weighted Mean	26,859,804,797	62.1%	100,000	0.0%	16,412,199,559	37.9%	43,272,104,356
			Median		67.8%		0.0%		32.2%	
			Max		87.0%		0.0%		57.2%	
			Min		42.8%		0.0%		13.0%	

Source:

Stock Price: Yahoo

Market Value Debt: Bond Analysis

Target

65%

0%

35%

100%

SUPPORT FOR MARKET MULTIPLES

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Company	Ticker	Stock Avg	Revenues	Multiple	Cash Flow	Multiple	Earnings	Multiple	Divds Decld	Multiple	Book Value	Multiple
AGL Resources	atg	37.718	32.050	1.2	5.30	7.1	3.00	12.6	1.76	21.4	24.20	1.6
Atmos Energy Corp	ato	30.147	53.200	0.6	4.65	6.5	2.16	14.0	1.34	22.5	24.20	1.2
Laclede Group	lg	35.570	77.100	0.5	4.05	8.8	2.43	14.6	1.57	22.7	24.95	1.4
New Jersey Resources	njr	41.690	63.810	0.7	3.28	12.7	2.46	16.9	1.36	30.7	17.53	2.4
Nicor Inc	gas	46.615	59.350	0.8	7.10	6.6	2.75	17.0	1.86	25.1	23.70	2.0
Nisource Inc	ni	17.335	22.600	0.8	3.40	5.1	1.25	13.9	0.92	18.8	17.75	1.0
NW Natural Gas	nwn	48.205	28.100	1.7	5.20	9.3	2.75	17.5	1.68	28.7	25.80	1.9
Piedmont Natural Gas	pnv	29.170	22.100	1.3	2.75	10.6	1.50	19.4	1.11	26.3	12.75	2.3
South Jersey Industries	sjl	51.265	30.000	1.7	3.90	13.1	2.70	19.0	1.36	37.7	18.85	2.7
Southwest Gas	swx	35.177	39.650	0.9	6.50	5.4	2.35	15.0	1.00	35.2	24.55	1.4
UGI Corp	ugi	30.210	51.020	0.6	4.30	7.0	2.38	12.7	0.90	33.6	16.65	1.8
WGL Holdings	wgl	37.485	53.600	0.7	4.11	9.1	2.27	16.5	1.51	24.8	22.82	1.6
Mean				0.9		8.4		15.8		27.3		1.8
Median				0.8		7.9		15.7		25.7		1.7
Max				1.7		13.1		19.4		37.7		2.7
Min				0.46		5.1		12.6		18.8		1.0
Std Dev				0.4		2.7		2.3		5.9		0.5
Coefficient of Variation				0.5		0.3		0.1		0.2		0.3
Say				0.8		8.0		15.7		25.7		1.7

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

CAPITAL ASSET PRICING MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

$$\text{Ex Post}$$

$$K_e = R_f + B (R_m - R_f)$$

Ke = Cost of Equity	7.37%
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to page 1

Rf =	risk free rate	4.25%
Rp =	risk premium	4.80%
B =	Beta	0.65

page 7

Rp = Risk Premium	(Rm-Rf)	4.80%
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to above

2011 Ibbotson Risk Premia Over Time Report, Page 3

	9.90% Large Company Geometric Rm
less	5.10% Average Historical Rf Income Return

Rf = Risk Free Rate	4.25%
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to above

2011 Ibbotson Risk Premia Over Time Report, Page 4

Long Term (20 years) US Treasury Bond Yield	4.10%
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Value Line Investment Survey, Selected Yields January 7, 2011, page 2469

US Treasury Securities year end data	
30 year	4.43%
30 year Zero	4.71%

Federal Reserve Statistical Release (<http://www.federalreserve.gov/Releases/H15/Current/>)

January 3, 2011 as of 12-31-10

Treasury Constant Maturities		
20 year	4.13%	
30 year	4.34%	
20 year TIPS	1.59%	
	2.54%	Inflation Indication
		2.50%

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT CAPITAL ASSET PRICING MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

$$\text{Ex Ante}$$

$$K_e = R_f + B (R_p)$$

Ke =	Cost of Equity	7.66%
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to page 1

Rm =	rate of return	9.50%
Rf =	risk free rate	4.25%
Rp =	risk premium	5.25%
B =	Beta	0.65

page 7

Rp =	Risk Premium	5.25%
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to above

Shannon Pratt and Roger Grabowski	3.50- 6.00%	
Cost of Capital, Applications and Examples, Third Edition, 2008, Page 113		
Dr. Aswath Damodaran	5.20%	
http://pages.stern.nyu.edu/~adamodar/		
2010 Implied Premium		
Ibbotson	6.00%	
2011 Risk Premia Over Time Report, Page 4		
Long-horizon expected ERP (supply side)		
Campbell Harvey	2.89%	December 2010
The Equity Risk Premium 10 Year Data: Evidence from the Duke CFO Outlook Survey	3.42%	10 year average
	2.39 - 4.74%	10 year average range

Rf =	Risk Free Rate	4.25%
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to above

2011 Ibbotson Risk Premia Over Time Report, Page 4	
Long Term (20 years) US Treasury Bond Yield	4.10%

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Federal Reserve Statistical Release (<http://www.federalreserve.gov/Releases/H15/Current/>)

January 3, 2011 as of 12-31-10

Treasury Constant Maturities		
20 year	4.13%	
30 year	4.34%	
20 year TIPS	1.59%	
	2.54%	Inflation Indication
		2.50%

BETA CALCULATION FOR CAPM

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Company	Ticker	Value Line
AGL Resources	atg	0.75
Atmos Energy Corp	ato	0.65
Laclede Group	lg	0.60
New Jersey Resources	njr	0.65
Nicor Inc	gas	0.70
Nisource Inc	ni	0.85
NW Natural Gas	nwn	0.60
Piedmont Natural Gas	pny	0.65
South Jersey Industries	sjj	0.60
Southwest Gas	swx	0.75
UGI Corp	ugi	0.65
WGL Holdings	wgl	0.65
Mean		0.68
Median		0.65
Max		0.85
Min		0.60

Source: Value Line-five year, weekly

Say

0.65

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Based on Dividend Growth

$$K_e = (D_1 / P_o) + G$$

K_e = Cost of Equity
 D_1 = Expected Dividends
 P_o = Current Price
 G = Sustainable Growth

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	Dividend Growth (G)	Ke
AGL Resources	atg	37.718	1.80	4.77%	2.20%	6.97%
Atmos Energy Corp	ato	30.147	1.36	4.51%	1.99%	6.50%
Laclede Group	lg	35.570	1.61	4.53%	2.75%	7.28%
New Jersey Resources	njr	41.690	1.44	3.45%	3.49%	6.94%
Nicor Inc	gas	46.615	1.86	3.99%	nil	nmf
Nisource Inc	ni	17.335	0.93	5.36%	0.54%	5.90%
NW Natural Gas	nwn	48.205	1.72	3.57%	3.93%	7.50%
Piedmont Natural Gas	pnv	29.170	1.15	3.94%	3.42%	7.37%
South Jersey Industries	sjj	51.265	1.48	2.89%	7.85%	10.74%
Southwest Gas	swx	35.177	1.05	2.98%	4.66%	7.65%
UGI Corp	ugi	30.210	1.00	3.31%	6.55%	9.86%
WGL Holdings	wgl	37.485	1.55	4.13%	2.55%	6.68%
					Mean	7.58%
					Median	7.28%
					Max	10.74%
					Min	5.90%

Source: Value Line Projections to 13-15

Say 7.40%

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT

DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Based on Earnings Growth

$$K_e = (D_1 / P_o) + G$$

K_e = Cost of Equity
 D_1 = Expected Dividends
 P_o = Current Price
 G = Sustainable Growth

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	Earnings Growth (G)	Ke
AGL Resources	atg	37.718	1.80	4.77%	4.66%	9.44%
Atmos Energy Corp	ato	30.147	1.36	4.51%	5.74%	10.25%
Laclede Group	lg	35.570	1.61	4.53%	5.41%	9.94%
New Jersey Resources	njr	41.690	1.44	3.45%	5.09%	8.54%
Nicor Inc	gas	46.615	1.86	3.99%	2.20%	6.19%
Nisource Inc	ni	17.335	0.93	5.36%	6.37%	11.73%
NW Natural Gas	nwn	48.205	1.72	3.57%	4.26%	7.83%
Piedmont Natural Gas	pny	29.170	1.15	3.94%	6.09%	10.03%
South Jersey Industries	sjj	51.265	1.48	2.89%	5.93%	8.82%
Southwest Gas	swx	35.177	1.05	2.98%	4.48%	7.46%
UGI Corp	ugi	30.210	1.00	3.31%	1.24%	4.55%
WGL Holdings	wgl	37.485	1.55	4.13%	2.95%	7.09%
					Mean	8.49%
					Median	8.68%
					Max	11.73%
					Min	4.55%

Source: Value Line Projections to 13-15

Say 8.60%

SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT DIVIDEND GROWTH MODEL

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Based on Return on Equity

$$K_e = \frac{D_1}{P_o} + G$$

K_e = Cost of Equity
D₁ = Expected Dividends
P_o = Current Price
G = Sustainable Growth
b = Retained Earnings (plowback)
ROE = Return on Equity

Value Line								
Company	Ticker	Stock Price (P _o)	Expected Dividend (D ₁)	Dividend Yield (D ₁ /P _o)	b (1-payout ratio)	ROE	Growth (b*ROE)	K _e
AGL Resources	atg	37.718	1.80	4.77%	45.0%	13.00%	5.85%	10.62%
Atmos Energy Corp	ato	30.147	1.36	4.51%	40.0%	9.50%	3.80%	8.31%
Laclede Group	lg	35.570	1.61	4.53%	35.0%	9.50%	3.33%	7.85%
New Jersey Resources	njr	41.690	1.44	3.45%	48.0%	14.10%	6.77%	10.22%
Nicor Inc	gas	46.615	1.86	3.99%	33.0%	11.50%	3.80%	7.79%
Nisource Inc	ni	17.335	0.93	5.36%	27.0%	7.00%	1.89%	7.25%
NW Natural Gas	nwn	48.205	1.72	3.57%	40.0%	10.50%	4.20%	7.77%
Piedmont Natural Gas	pnv	29.170	1.15	3.94%	26.0%	12.00%	3.12%	7.06%
South Jersey Industries	sji	51.265	1.48	2.89%	51.0%	14.50%	7.40%	10.28%
Southwest Gas	swx	35.177	1.05	2.98%	58.0%	9.50%	5.51%	8.49%
UGI Corp	ugi	30.210	1.00	3.31%	62.0%	14.30%	8.87%	12.18%
WGL Holdings	wgl	37.485	1.55	4.13%	35.0%	10.00%	3.50%	7.63%
Mean								8.79%
Median								8.08%
Max								12.18%
Min								7.06%
Say								8.00%

SUPPORT FOR DEBT RATING AND DEBT YIELD RATE

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Company	Ticker	Mergent's Ratings	S&P Ratings	WAYTM
AGL Resources	atg		A-	6.08%
Atmos Energy Corp	ato		BBB+	5.26%
Laclede Group	lg		A	5.35%
New Jersey Resources	njr		A	
Nicor Inc	gas		AA	
Nisource Inc	ni		BBB-	
NW Natural Gas	nwn		A+	5.37%
Piedmont Natural Gas	pnv		A	6.05%
South Jersey Industries	sji		BBB+	7.38%
Southwest Gas	swx	Baa2	BBB	6.52%
UGI Corp	ugi			4.45%
WGL Holdings	wgl	A2	AA-	3.80%
Overall Average Debt Rating		Baa1	A-	5.58%

bond analysis, A-BBB bonds

All issues 20+ year maturities

Guideline Companies, All Ratings	5.41%	6.02%
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bond analysis page 12

Mergent's Bond Record January 2011, page 210

Corporate	Aaa	Aa	A	Baa
October	4.68%	4.83%	5.09%	5.72%
November	4.87%	5.07%	5.33%	5.92%
December	5.02%	5.26%	5.52%	6.10%
4th Qtr Average	4.86%	5.05%	5.31%	5.91%
Public Utilities	Aaa	Aa	A	Baa
October		4.89%	5.10%	5.62%
November		5.12%	5.37%	5.85%
December		5.32%	5.56%	6.04%
4th Qtr Average		5.11%	5.34%	5.84%
Industrials	Aaa	Aa	A	Baa
October	4.68%	4.77%	5.07%	5.81%
November	4.87%	5.02%	5.29%	5.99%
December	5.02%	5.19%	5.47%	6.15%
4th Qtr Average	4.86%	4.99%	5.28%	5.98%

Debt Yield Rate	6.00%
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12/31/2010

Natural Gas Distribution Bond Analysis

2011.5

Company	type	coupon	maturity	Price 12/10	Issued / Book	current yield	yield to maturity	WAYTM	Rating	Mkt Val	Mkt : Book	Embedded	Debt Service
AGL Resource	MTN	7.300	2027	112.02 \$	54,000,000	6.52%	6.08%	0.11%	A-	\$ 60,490,800	112.02%		3,942,000
	1	100	Sum	112.02 \$	54,000,000	Percent of book	112.02%	0.11%	\$	60,490,800	112.02%	7.30%	3,942,000
Atmos Energy	Sr Nt	6.350	2017	110.22 \$	250,000,000	5.76%	4.23%	0.36%	BBB+	\$ 275,550,000	110.22%		15,875,000
Atmos Energy	Deb	6.750	2028	108.62 \$	150,000,000	6.21%	5.92%	0.30%	BBB+	\$ 162,930,000	108.62%		10,125,000
Atmos Energy	Sr Nt	5.950	2034	98.72 \$	200,000,000	6.03%	6.06%	0.41%	BBB+	\$ 197,440,000	98.72%		11,900,000
	3	300	Sum	317.56 \$	600,000,000	Percent of book	105.85%	1.07%	\$	635,920,000	105.99%	6.32%	37,900,000
Laclede Gas	1st Mtg	5.500	2019	105.07 \$	150,000,000	5.23%	4.68%	0.24%	A	\$ 157,605,000	105.07%		8,250,000
Laclede Gas	1st Mtg	7.000	2029	111.62 \$	25,000,000	6.27%	5.92%	0.05%	A	\$ 27,905,000	111.62%		1,750,000
Laclede Gas	1st Mtg	7.900	2030	122.41 \$	30,000,000	6.45%	5.88%	0.06%	A	\$ 36,723,000	122.41%		2,370,000
Laclede Gas	1st Mtg	6.000	2034	105.15 \$	150,000,000	5.71%	5.59%	0.28%	A	\$ 157,725,000	105.15%		9,000,000
Laclede Gas	1st Mtg	6.150	2036	102.58 \$	55,000,000	6.00%	5.95%	0.11%	NR	\$ 56,419,000	102.58%		3,382,500
	5	500	Sum	546.83 \$	410,000,000	Percent of book	109.37%	0.74%	\$	436,377,000	106.43%	6.04%	24,752,500
Northwest Nat Gas	MTN	7.630	2019	120.76 \$	123,000,000	6.32%	4.33%	0.18%	A+	\$ 148,534,800	120.76%		9,384,900
Northwest Nat Gas	MTN	9.050	2021	135.04 \$	10,000,000	6.70%	4.45%	0.02%	A	\$ 13,504,000	135.04%		905,000
Northwest Nat Gas	MTN	7.000	2017	117.62 \$	40,000,000	5.95%	3.43%	0.05%	A+	\$ 47,048,000	117.62%		2,800,000
Northwest Nat Gas	MTN	7.720	2025	127.57 \$	123,000,000	6.05%	4.88%	0.20%	A+	\$ 156,911,100	127.57%		9,495,600
Northwest Nat Gas	MTN	5.620	2023	106.80 \$	150,000,000	5.26%	4.84%	0.25%	A+	\$ 160,200,000	106.80%		8,430,000
Northwest Nat Gas	MTN	7.740	2030	118.79 \$	123,000,000	6.52%	6.03%	0.25%	A+	\$ 146,111,700	118.79%		9,520,200
Northwest Nat Gas	MTN	7.850	2030	120.04 \$	123,000,000	6.54%	6.02%	0.25%	A+	\$ 147,649,200	120.04%		9,655,500
Northwest Nat Gas	MTN	5.820	2032	96.30 \$	108,000,000	6.04%	6.14%	0.23%	A+	\$ 104,004,000	96.30%		6,285,600
Northwest Nat Gas	MTN	5.660	2033	94.97 \$	150,000,000	5.96%	6.09%	0.31%	A+	\$ 142,455,000	94.97%		8,490,000
	9	900	Sum	1037.89 \$	950,000,000	Percent of book	115.32%	1.73%	\$	1,066,417,800	112.25%	6.84%	64,966,800
Piedmont Nat Gas	MTN	7.950	2029	120.83 \$	60,000,000	6.58%	6.00%	0.12%	A	\$ 72,498,000	120.83%		4,770,000
Piedmont Nat Gas	Nt	6.000	2033	101.35 \$	200,000,000	5.92%	5.89%	0.40%	A	\$ 202,700,000	101.35%		12,000,000
Piedmont Nat Gas	Nt	6.250	2036	100.26 \$	200,000,000	6.23%	6.23%	0.42%	A	\$ 200,520,000	100.26%		12,500,000
	3	300	Sum	322.44 \$	460,000,000	Percent of book	107.48%	0.94%	\$	475,718,000	103.42%	6.36%	29,270,000
South Jersey Inds	MTN	5.550	2033	80.59 \$	30,000,000	6.89%	7.38%	0.08%	A	\$ 24,177,000	80.59%		1,665,000
	1	100	Sum	80.59 \$	30,000,000	Percent of book	80.59%	0.08%	\$	24,177,000	80.59%		1,665,000
Southwest Gas	Deb	8.000	2026	113.57 \$	75,000,000	7.04%	6.52%	0.17%	BBB	\$ 85,177,500	113.57%		6,000,000
	1	100	Sum	113.57 \$	75,000,000	Percent of book	113.57%	0.17%	\$	85,177,500	113.57%	8.00%	6,000,000
UGI Corp	MTN	7.250	2017	117.01 \$	20,000,000	6.20%	3.77%	0.03%	BBB	\$ 23,402,000	117.01%		1,450,000
UGI Corp	Sr Nt	5.753	2016	111.69 \$	100,000,000	5.15%	2.94%	0.10%	NR	\$ 111,690,000	111.69%		5,753,000
UGI Corp	Sr Nt	6.206	2036	101.35 \$	100,000,000	6.12%	6.10%	0.21%	NR	\$ 101,350,000	101.35%		6,206,000
	3	300	Sum	330.05 \$	220,000,000	Percent of book	110.02%	0.33%	\$	236,442,000	107.47%	6.10%	13,409,000
WGL Holdings	MTN	6.490	2027	109.89 \$	8,000,000	5.91%	5.52%	0.01%	AA-	\$ 8,791,200	109.89%		519,200
WGL Holdings	MTN	6.820	2026	115.03 \$	25,000,000	5.93%	5.31%	0.05%	AA-	\$ 28,757,500	115.03%		1,705,000
WGL Holdings	MTN	5.440	2025	109.03 \$	41,000,000	4.99%	4.53%	0.06%	AA-	\$ 44,702,300	109.03%		2,230,400
WGL Holdings	MTN	5.170	2016	110.85 \$	25,000,000	4.66%	2.58%	0.02%	AA-	\$ 27,712,500	110.85%		1,292,500
WGL Holdings	MTN	5.700	2036	102.00 \$	25,000,000	5.59%	5.55%	0.05%	AA-	\$ 25,500,000	102.00%		1,425,000
WGL Holdings	MTN	5.781	2036	103.10 \$	25,000,000	5.61%	5.55%	0.05%	AA-	\$ 25,775,000	103.10%		1,445,250
	6	600	Sum	649.90 \$	149,000,000	Percent of book	108.32%	0.24%	\$	161,238,500	108.21%		8,617,350
			Total	\$	2,948,000,000			5.41%	Total	\$ 3,181,958,600	107.94%	6.46%	\$ 190,522,650

This includes short term. For 20+ year maturities see below

Company	type	coupon	maturity	Price 12/10	Issued / Book	current yield	yield to maturity	Weighted A	Rating	Mkt Val	Mkt : Book	Embedded	Debt Service
Northwest Nat Gas	MTN	5.820	2032	96.30 \$	108,000,000	6.04%	6.14%	0.53%	A+	\$ 104,004,000	96.30%		6,285,600
Northwest Nat Gas	MTN	5.660	2033	94.97 \$	150,000,000	5.96%	6.09%	0.73%	A+	\$ 142,455,000	94.97%		8,490,000
Piedmont Nat Gas	Nt	6.000	2033	101.35 \$	200,000,000	5.92%	5.89%	0.95%	A	\$ 202,700,000	101.35%		12,000,000
South Jersey Inds	MTN	5.550	2033	80.59 \$	30,000,000	6.89%	7.38%	0.18%	A	\$ 24,177,000	80.59%		1,665,000
Atmos Energy	Sr Nt	5.950	2034	98.72 \$	200,000,000	6.03%	6.06%	0.97%	BBB+	\$ 197,440,000	98.72%		11,900,000
Laclede Gas	1st Mtg	6.000	2034	105.15 \$	150,000,000	5.71%	5.59%	0.67%	A	\$ 157,725,000	105.15%		9,000,000
Laclede Gas	1st Mtg	6.150	2036	102.58 \$	55,000,000	6.00%	5.95%	0.26%	NR	\$ 56,419,000	102.58%		3,382,500
Piedmont Nat Gas	Nt	6.250	2036	100.26 \$	200,000,000	6.23%	6.23%	1.00%	A	\$ 200,520,000	100.26%		12,500,000
UGI Corp	Sr Nt	6.206	2036	101.35 \$	100,000,000	6.12%	6.10%	0.49%	NR	\$ 101,350,000	101.35%		6,206,000
WGL Holdings	MTN	5.700	2036	102.00 \$	25,000,000	5.59%	5.55%	0.11%	AA-	\$ 25,500,000	102.00%		1,425,000
WGL Holdings	MTN	5.781	2036	103.10 \$	25,000,000	5.61%	5.55%	0.11%	AA-	\$ 25,775,000	103.10%		1,445,250
			Total	\$	1,243,000,000			6.02%	Total	\$ 1,238,065,000	99.60%	5.98%	\$ 74,299,350

Source: Standard & Poor's Bond Guide, January 2011, 2010 Yr End Prices

Embedded debt rate 5.98%

Weighted average yield to maturity 6.02%

Debt service / Market value 6.00%

SAY: 6.00%

DATA INPUT

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Instructions: Data entered on this page will flow to the applicable worksheets.

Guideline Companies		Stock Price	Revenues	Cash Flow	Earnings	Dividends	Bk Value	Common	Calculated Debt	Wtd Avg YTM	Payout Ratio	Payout Ratio	ROE
Name	Ticker	(4th Qtr Avg)	Per Share	Per Share	Per Share	Per Share	Stock	Shares	mk to bk		calculated	V L	V L
AGL Resources	atg	37.718	32.050	5.300	3.000	1.760	24.200	78,041,667	112.02%	6.08%	59%	55%	13.0%
Atmos Energy Corp	ato	30.147	53.200	4.650	2.160	1.340	24.200	90,154,801	105.99%	5.26%	62%	60%	9.5%
Laclede Group	lg	35.570	77.100	4.050	2.430	1.570	24.950	22,292,095	106.43%	5.35%	65%	65%	9.5%
New Jersey Resources	njr	41.690	63.810	3.280	2.460	1.360	17.530	41,250,098	107.94%		55%	52%	14.1%
Nicor Inc	gas	46.615	59.350	7.100	2.750	1.860	23.700	45,534,284	107.94%		nmf	67%	11.5%
Nisource Inc	ni	17.335	22.600	3.400	1.250	0.920	17.750	278,305,866	107.94%		74%	73%	7.0%
NW Natural Gas	nwn	48.205	28.100	5.200	2.750	1.680	25.800	26,533,028	112.25%	5.37%	nmf	60%	10.5%
Piedmont Natural Gas	pon	29.170	22.100	2.750	1.500	1.110	12.750	71,113,862	103.42%	6.05%	74%	74%	12.0%
South Jersey Industries	sjj	51.265	30.000	3.900	2.700	1.360	18.850	29,872,825	80.59%	7.38%	50%	49%	14.5%
Southwest Gas	swx	35.177	39.650	6.500	2.350	1.000	24.550	45,548,236	113.57%	6.52%	43%	42%	9.5%
UGI Corp	ugi	30.210	51.020	4.300	2.380	0.900	16.650	110,466,049	107.47%	4.45%	nmf	38%	14.3%
WGL Holdings	wgl	37.485	53.600	4.110	2.270	1.510	22.820	51,071,533	108.21%	3.80%	67%	65%	10.0%

Value Line December 10, 2010

Yahoo

Value Line

Value Line

Value Line

Value Line

Value Line

Value Line

Bond analysis
106.15%
107.94%

Bond analysis

calculated

Value Line

Value Line

SUPPORT FOR DIRECT CAPITALIZATION EQUITY COMPONENT

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

Company	Ticker	Stock Average	2010		2011		2010		2011	
			Actual Earnings Ratio (EPS/P)		Projected Earnings Ratio (PEPS/P)		Cash Flow Ratio (CF/P)		Projected Cash Flow Ratio	
AGL Resources	atg	37.72	3.00	8.0%	3.15	8.4%	5.30	14.1%	5.55	14.7%
Atmos Energy Corp	ato	30.15	2.16	7.2%	2.30	7.6%	4.65	15.4%	5.05	16.8%
Laclede Group	lg	35.57	2.43	6.8%	2.55	7.2%	4.05	11.4%	4.35	12.2%
New Jersey Resources	njr	41.69	2.46	5.9%	2.65	6.4%	3.28	7.9%	3.50	8.4%
Nicor Inc	gas	46.62	2.75	5.9%	2.80	6.0%	7.10	15.2%	7.30	15.7%
Nisource Inc	ni	17.34	1.25	7.2%	1.30	7.5%	3.40	19.6%	3.55	20.5%
NW Natural Gas	nwn	48.21	2.75	5.7%	2.80	5.8%	5.20	10.8%	5.30	11.0%
Piedmont Natural Gas	pnv	29.17	1.50	5.1%	1.60	5.5%	2.75	9.4%	2.85	9.8%
South Jersey Industries	sjj	51.27	2.70	5.3%	2.90	5.7%	3.90	7.6%	4.05	7.9%
Southwest Gas	swx	35.18	2.35	6.7%	2.45	7.0%	6.50	18.5%	6.70	19.0%
UGI Corp	ugi	30.21	2.38	7.9%	2.40	7.9%	4.30	14.2%	4.35	14.4%
WGL Holdings	wgl	37.49	2.27	6.1%	2.10	5.6%	4.11	11.0%	3.95	10.5%
Mean			6.5%		6.7%		12.9%		13.4%	
Median			6.4%		6.7%		12.7%		13.3%	
Max			8.0%		8.4%		19.6%		20.5%	
Min			5.1%		5.5%		7.6%		7.9%	

Source:

Say

6.4%

6.7%

12.7%

13.3%

Actual earnings: Value Line / Q4 average stock price

Estimated Earnings: Value Line / Q4 average stock price

Actual Cash Flow: Value Line / Q4 average stock price

Estimated Cash Flow: Value Line / Q4 average stock price

AVERAGE FOURTH QUARTER STOCK PRICE

WASHINGTON STATE DEPARTMENT OF REVENUE

2011 ASSESSMENT YEAR

NATURAL GAS DISTRIBUTION

AGL Resources atg							36.72
							Q4 Average
Date	Open	High	Low	Close	Volume	Adj Close	37.718
12/01/2010	37.1	37.97	34.21	35.85	758400	35.85	
11/01/2010	39.37	39.66	36.68	36.73	335300	36.73	
10/01/2010	38.46	39.55	38.24	39.26	311300	38.81	

Atmos Energy Corp ato							30.147
Date	Open	High	Low	Close	Volume	Adj Close	
12/01/2010	30.34	31.99	30.32	31.2	534100	31.2	
11/01/2010	29.59	30.71	29.31	30.07	496100	30.07	
10/01/2010	29.42	29.71	28.84	29.45	411000	29.12	

Laclede Group Inc lg							35.570
Date	Open	High	Low	Close	Volume	Adj Close	
12/01/2010	35.8	37.82	35.41	36.54	81800	36.54	
11/01/2010	35.18	36	34.15	35.35	64600	34.95	
10/01/2010	34.69	35.75	34.29	35.11	62600	34.72	

New Jersey Resources njr							41.690
Date	Open	High	Low	Close	Volume	Adj Close	
12/01/2010	43.64	44.1	42.39	43.11	177200	43.11	
11/01/2010	40.62	43.77	39.7	43.11	169500	42.75	
10/01/2010	39.59	41.24	38.94	40.49	145300	40.15	

Nicor Inc gas							46.615
Date	Open	High	Low	Close	Volume	Adj Close	
12/01/2010	43.75	50.81	42.98	49.92	1023300	49.92	
11/01/2010	47.91	48.43	43	43.25	362000	42.85	
10/01/2010	46.23	48.47	46	47.63	387400	47.19	

Nisource Inc ni							17.335
Date	Open	High	Low	Close	Volume	Adj Close	
12/01/2010	16.93	17.78	16.83	17.62	2344800	17.62	
11/01/2010	17.47	17.64	16.65	16.73	2179500	16.73	
10/01/2010	17.55	17.96	17.15	17.31	3015100	17.31	

NW Natural Gas nwn							48.205
Date	Open	High	Low	Close	Volume	Adj Close	
12/01/2010	49.42	49.61	44.02	46.47	280800	46.47	
11/01/2010	49.81	50.09	47.42	48.82	110700	48.82	
10/01/2010	47.64	50.86	47.23	49.29	109000	49.29	

Piedmont Natural Gas pny							29.170
Date	Open	High	Low	Close	Volume	Adj Close	
12/01/2010	29.96	30.1	27.77	27.96	618400	27.96	

11/01/2010	28.98	29.98	28.29	29.58	342600	29.3
10/01/2010	29.24	29.85	29.03	29.49	402600	29.21

South Jersey Industries sjj

Date	Open	High	Low	Close	Volume	Adj Close	51.265
12/01/2010	51.79	54.24	51.61	52.82	101500	52.82	
11/01/2010	50.36	52.13	49.33	51.19	105400	50.83	
10/01/2010	49.64	51.01	49.27	50.36	124100	50.01	

Southwest Gas Corp swx

Date	Open	High	Low	Close	Volume	Adj Close	35.177
12/01/2010	35.54	37.25	34.92	36.67	171200	36.67	
11/01/2010	35	36.14	34.1	35.03	160300	35.03	
10/01/2010	33.93	35.24	33.41	34.76	170600	34.52	

UGI Corp ugi

Date	Open	High	Low	Close	Volume	Adj Close	30.210
12/01/2010	30.09	32.49	30.05	31.58	794500	31.58	
11/01/2010	30.3	30.9	29.11	29.67	491700	29.44	
10/01/2010	28.88	30.14	28.57	30.09	543100	29.85	

WGL Holdings wgl

Date	Open	High	Low	Close	Volume	Adj Close	37.485
12/01/2010	36.77	37.32	34.69	35.77	473600	35.4	
11/01/2010	38.8	40	36.13	36.26	346600	35.88	
10/01/2010	37.94	39.1	37.67	38.55	265200	38.15	

Source:
finance.yahoo.com
Historical Stock Quotes
01/03/2011